



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/336,207	06/18/1999	ROBERT G. MCCrackEN	8594560/9702	7367

26386 7590 10/29/2002

DAVIS, BROWN, KOEHN, SHORS & ROBERTS, P.C.  
THE FINANCIAL CENTER  
666 WALNUT STREET  
SUITE 2500  
DES MOINES, IA 50309-3993

EXAMINER

HORTON, YVONNE MICHELE

ART UNIT PAPER NUMBER

3635

DATE MAILED: 10/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

**Office Action Summary**

Application No.

09/336,207

Applicant(s)

ROBERT G. McCracken

Examiner

YVONNE M. HORTON

Art Unit

3635



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Jul 16, 2002
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other:  |

Art Unit: 3635

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 12 recites the limitation "the light-weight and high-strength beam member" in line 2. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 3 recites the limitation "the recessed end plate" in line 3. Although the claim has introduced an "end plate", there is no mention of a "recessed" end plate. Hence, there is insufficient antecedent basis for this limitation in the claim.

5. Also in claim 12, the recitation "having the same strength" and "having the same length" is vague and indefinite in that it is not clear exactly what is encompassed by "the same" strength or length when no strength or length has been previously identified. Further clarification and correction is required.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1,4-5 and 8-10 stand rejected and claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Art Unit: 3635

CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI. CH 000414118 discloses a beam (B) including a pair of longitudinally extending and opposing flanges (2) each having a central web section (W), a pair of inwardly extending leg sections (L); and a convoluted web member (1) having alternating protrusions (4) adjacent to leg sections (L), (See marked-up attachment). The web member (1) is secured to the central web section (W) of the flanges (2), and the protrusions (4) are secured to the leg sections (L) by securing means (3). CH 000414118 discloses the basic claimed beam except for the use of end plates. The use of brackets and end plates to provide for the capability of interconnecting beam members is old and very well known in the art. BERNARDI teaches that it is known in the art to provide a beam structure (10) with end plates (36). It would have been obvious to one having ordinary skill in the art to provide the beam member of CH 000414118 with the end plates of BERNARDI in order to enable adjacent beam structures to be secured together and to provide the beam structure with added stiffness adjacent the ends thereof. Without end plates, a beam is weaker at the ends and are more likely to give under force applied at the ends. The functional recitation that the end plate provides for a "full moment" connection has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant presence of the functional language.

In reference to claims 4 and 5 the web member (W) and the flanges (2) of CH 000414118 are coextensive in length and are made from sheet metal, (obtained from a brief translation).

Art Unit: 3635

In regards to claims 8 and 9, the web member (W) is secured to the central web section (20) of the flanges (2) by welds (3), and the protrusions (4) are also secured to the leg sections (L) by welds (3).

Regarding claim 10, the flanges are formed from sheet material, a material that inherently enables the flange members to be penetrated if desired or needed.

In reference to claim 12, in view of the 35 USC § 112 rejections noted above, BERNARDI teaches the use of end plates. It is inherent to one having ordinary skill in the art the end plates provide "a moment connection" in that the end plates obviously provide the structure with added strength, stability and rigidity and in conjunction with the welds, aid in resisting shear forces, column 2, lines 46-52. Moment is measured by forces, such as shear, applied thereon.

8. Claims 2,3 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI as applied to claim 1 above, and further in view of U.S. Patent #6,253,529 to De BOER. As discussed in paragraph 2 above, CH 000414118, as modified by BERNARDI, discloses the basic claimed beam member except for the inwardly extending sections of the opposing flanges being recessed. Although it is old and very well known in the art to form a recess in a member to flushly accommodate and tightly position a second member adjacent thereto, De BOER teaches that it is known in the art to form recesses (19,34,35) in the inwardly extending legs (14,15) of member (12). Hence, it would have been obvious to one having ordinary skill in the art to provide the inwardly extending legs of the opposing flanges of CH 000414118, as modified by BERNARDI, with the recesses of

Art Unit: 3635

De BOER in order to ensure a proper, flush and secure fit between the end plate and the adjacent and/or interfitting members.

In further reference to claim 3, the size of the recess with respect to the end plate would have been an obvious matter of design choice depending upon how securely the end plate is needed to be positioned against the opposing flanges. If not play is desired, the size of the recess is considerably close to the thickness of the end plate.

In further regards to claim 11, the flanges (2) are C-shaped and leg sections (2) include in-turned portions (IT), (See also the marked-up attachment from the previous Official Action dated 02/05/01).

9. Claims 6 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI, as applied to claim 1 above, and further in view of U.S. Patent #5,956,919 to McCracken. CH 000414118, as modified by BERNARDI discloses the basic claimed beam except for the specifics of the material characteristics. McCracken, in column 3, lines 25-29, teaches that the metal forming the web and the metal forming the flanges have "distinct" characteristics and thicknesses - the web being 0.0598 inches and 16 gauge and the flanges being 0.0747 inches and 14 gauge. Hence, it would have been obvious to one having ordinary skill in the art to form the web and flanges out of a metal having "distinct" characteristics and thicknesses in order to be used as a replacement for lumber beams which are conventional in the art for door and window framing members, but are extremely susceptible to warping when encountered by moisture; or for use in forming supports for concrete structures. The applicant is further reminded that material selection and the

Art Unit: 3635

thickness thereof is an obvious matter of design choice that depends on the desired performance characteristics of the resulting beam member.

### ***Response to Arguments***

10. Applicant's arguments filed 7/16/02 have been fully considered but they are not persuasive, in part.

In response to applicant's argument that the prior art does not teach or fairly suggest the "purpose" of the claimed invention, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

### ***Conclusion***

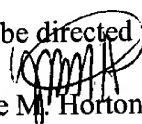
11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 3635

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909.

  
Yvonne M. Horton  
Patent Examiner  
Art Unit 3635  
October 7, 2002

  
Carl D. Friedman  
Supervisory Patent Examiner  
Group 3600